REMARKS

This Amendment is in response to the Examiner's comments set forth in the Office Action of July 2, 2010. Claim 25 has been amended. Claims 1, 3, 5, 7, 11-18, 20-21, and 23-35 are currently pending in this application.

Reconsideration is respectfully requested in light of the comments and amendments herein.

The Office Action

Claim 25 is objected to because of minor informalities.

Claims 1, 2, 14, 20, 21, and 28-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,586,822 to Harbers (hereinafter "Harbers") in view of U.S. Patent Application Pub. No. US2003/0076051 A1 to Bowman et al. (hereinafter "Bowman") and in further view of U.S. Patent No. 6,234,648 to Borner et al. (hereinafter "Borner").

Claims 3, 5, 7, and 9-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Harbers and Bowman and further in view of Borner and U.S. Patent No. 5,758,951 A to Haitz (hereinafter "Haitz").

Claims 15-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Harbers and Bowman and further in view of Borner and U.S. Patent Application Pub. No. US2003//1056416 A1 to Stopa (hereinafter "Stopa").

Claim 18 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Harbers and Bowman and further in view of Borner and U.S. Patent Application Pub. No. US2004/0105262 A1 to Tseng et al. (hereinafter "Tseng").

Claims 23-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Harbers in view of Borner and further in view of U.S. Patent No. 5,49,646 to Brittell (hereinafter "Brittell").

Claims 26 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Harbers in view of Borner and further in view of Brittell and U.S. Patent No.6,746,885 to Cao (hereinafter "Cao").

In The Claims

Claim 25 is objected to on the grounds that "the light of a second wavelength" lacks antecedent basis. Accordingly, claim 25 has been amended to recite "light of a second wavelength", thus correcting the antecedent basis.

The Claims Distinguish Patentably Over the Cited References

The Office Action contends that Harbers teaches a light source having a light engine that includes a platform, at least one LED disposed on the platform, an enclosure surrounding a light generating area of the light engine, a base including a heat sink for conducting thermal energy away from the at least one LED into which the light engine is mounted, and a luminescent converting element adjacent to the LED. Further, the Office Action contends that Bowman teaches an LED module including a conversion circuit as claimed, and Borner teaches an LED lighting system comprising at least one LED disposed on a platform and a wavelength converting material being disposed one of on or within the material forming the enclosure. Applicants respectfully traverse.

Particularly, Applicant submits that the proposed combination of Harbers and Borner is improper. Harbers is directed to a lighting system that resembles a filament lamp, including a body in the form of a spirally wound wire that is coated with a conversion means. The lighting system further comprises a light transmitting envelope with a reflective coating, to reflect light not converted by the conversion means. Borner, in contrast, discloses a lighting system with at least two LEDs, a screen with a reflecting means, and a conversion means for converting a portion of the light emitted by a blue LED into green light. Borner desires to mix blue, red, and green light within the screen and emit white light in the direction 11. The Office Action purports that at the time the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the invention of Harbers by providing a wavelength conversion material on or within the material of the enclosure as taught by Borner for the purpose of creating an aesthetically pleasing light. Applicant respectfully submits that this reasoning is illogical. Harbers specifically includes a conversion means on the wire body for converting blue light to visible light in a higher wavelength range, such as green light, to be used as a look-alike of a carbon filament. The green light emitting conversion means of Borner, therefore, has absolutely no function in Harbers.

Furthermore, Borner has no interest in providing an incandescent lamp style, wherein an envelope encasing the LED platform exists, and through which light passes. This is the reason Borner provides a fully reflective layer, substantially 100% for visible light. (col. 5, lines 19-22). In short, there is not even a remote suggestion in either Harbers or Borner to coat the envelope with a phosphor material that is excited by radiation generated by LEDs mounted on a platform and residing on a heat sink. Accordingly, the Examiner must be relying on hindsight to achieve the present rejections.

Moreover, if Harbers is combined with Borner, as suggested by the Examiner, the lighting system produced would also include a reflection means as taught in Borner. Accordingly, modified Harbers in view of Borner would create a lighting system with a body that emits visible light and an envelope covering the body that includes a conversion means and a reflection means that reflects at least substantially 100% for visible light. Applicant respectfully submits that this combination is illogical, particularly since such a configuration would not be functional because the visible light emitted by the body would be reflected by the reflection means. There is no suggestion to take just the conversion layer of Borner, leaving behind the substantially 100% visible light reflective coating, and place that conversion layer on the envelope of Harbers where no conversion material is present; particularly, since Harbers already provides a conversion material on the lamp filament.

That the proposed combination picks and chooses specific features from Borner essentially uses Applicants application as a "road map" for selecting and combining the disclosures of the prior art. The Federal Circuit has held that "one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to depreciate the claimed invention". *In re* Fritch, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992). In short, it is not permissible to pick and choose only so much of Borner as will support the Examiner's position and ignore the clear teachings that would make such a combination non-functional.

Applicant therefore submits that one skilled in the art would have no motivation to combine the teachings of Harbers and Borner as the Examiner submits, since such would fail to provide any benefit or purpose, and in fact would destroy the functionality of Harbers. However, even if such a configuration was functional, providing a conversion means on the envelope of Harbers would in fact take away from the very purpose of Harbers, which is to emit light from the body as a look-alike for filament lamps. As such, Applicant respectfully submits that the

proposed combination of Harbers and Borner is improper and cannot support a conclusion of obviousness.

Further, with specific reference to claim 28, the Office Action submits that Harbers teaches a platform comprising a printed circuit board or a heat sink. However, claim 16 of Harbers, which the Examiner cites in support, recites a lamp cap and means for dissipating heat generated by the electroluminescent element to the lamp cap. There is no mention of a printed circuit board or a heat sink as is presently claimed. Simply stating a means for dissipating heat does not teach or suggest a platform heat sink or printed circuit board.

Additionally, with reference to claim 18, the Office Action cites Tseng as teaching a light engine including an AC to DC converter, and asserts that it would have been obvious to one of ordinary skill in the art to have modified the invention of Harbers, Bowman, and Borner such that an AC to DC converter was provided. Applicant respectfully disagrees and maintains that such a combination is again improper. In the Examiner's Remarks, it was stated that not only is the use of either an AC or DC power source well known, but the use of a conversion circuit to match the supplied voltage with the system voltage is well known and obvious for the purpose of preventing component damage. Applicant submits, however, that the issue is not whether an AC/DC conversion circuit is well known, but rather, the issue is whether the references are properly combinable to teach this feature to result in the claimed structure. Applicant recites that they are not.

The Office Action proposes to implement Bowman's teaching of an LED module having a conversion circuit with the AC/DC conversion circuit of Tseng. Bowman, however, is explicitly directed to a DC/DC converter to boost the voltage past that provided by the batteries. (See [0039]). Therefore, one skilled in the art would not look to the battery voltage raising DC/DC conversion circuit of Bowman when faced with the subject of the present application, nor would one skilled in the art combine the teachings of Bowman (DC/DC conversion) with the rectifier (AC/DC conversion) disclosed in Tseng. Applicant submits that it appears that the Office Action is attempting to recreate Applicant's invention piecemeal, by picking and choosing elements from unrelated teachings. Such a hindsight recreation of Applicant's invention is improper and insufficient to support a conclusion of obviousness.

Furthermore, although the Office Action acknowledges that Harbers, Bowman, and Borner do not disclose a light guide, Haitz is cited as teaching an illuminating source including

LEDs and a light guide within an enclosure. With specific regard to claim 5, which recites that the light guide provides an appearance of a filament, the Office Action submits that Harbers teaches a light bulb with a wire providing an appearance of a filament, and it would have been obvious to have modified the invention of Harbers, Bowman, and Borner, such that the light guide of Haitz was utilized to produce the desired lighting effect. Applicant respectfully disagrees, and submits that even if it was proper to combine the teachings of Harbers and Borner, which as Applicant discussed above is not the case, the wire in Harbers is nonetheless covered with a conversion means for converting light from a first to a second wavelength. There is no teaching or suggestion in any of the cited references that would motivate one skilled in the art to disregard the teaching of Harbers to instead replace the conversion material coated filament-like wire with the light guide of Haitz. In addition, since the LED of Harbers emits blue or green light, it is not understood how the Haitz light guide would function to provide the appearance and/or function of a filament.

Moreover, including the light guide of Haitz would destroy the very functionality of Harbers. The luminescent material-coated wire of Harbers emits visible light that is then emitted by the light transmissive envelope. The light not converted by the luminescent material is reflected back into the device by the reflective coating on the envelope. If, however, the wire was replaced with the light guide of Haitz, no light emitted by the opto-electronic elements would be converted into a wavelength range that can be transmitted by the envelope, and all the light would be reflected back into the lighting system.

With regard to claim 15, the Office Action submits that although Harbers, Bowman, and Borner do not disclose a heat sink comprising a slug inserted into the base, Stopa teaches an LED lighting device with a heat sink comprising a slug for conducting energy away from the LED. However, Applicant respectfully submits that the heat sink of Stopa does not include a slug inserted into the base of the light source. Rather, Stopa teaches that the slug is mounted to a PC board, which is mounted on a heat sink. (See Fig. 4 and paragraph [0042]). There is no teaching or slight suggestion that the slug is to be inserted into the base as is presently claimed.

Further, with reference to claim 17, the Office Action purports that Stopa teaches a plurality of fins. However, claim 17 recites that the heat sink extends radially from the base to conduct the thermal energy to ambient air. Applicant submits that the fins disclosed in Stopa clearly extend in a downward direction to conduct heat down, away from the LEDs. This is not a

radial configuration as is presently claimed.

Applicant submits that for at least the aforementioned reasons, claims 1, 3, 5, 7, 11-18, 20-21, and 23-35 patentable distinguish over the references cited herein. Accordingly, withdrawal of the rejection and allowance of the claims is respectfully requested.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application are now in condition for allowance.

☒ Remaining Claims, as delineated below:

(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT LESS HIGHEST NUMBER PREVIOUSLY PAID FOR		(3) NUMBER EXTRA
TOTAL CLAIMS	**22**	**- 22 =**	**0**
INDEPENDENT CLAIMS	**3**	**- 3 =**	**0**

☒ This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.

☒ The Commissioner is hereby authorized to charge any filing or prosecution fees which may be required, under 37 CFR 1.16, 1.17, and 1.21 (but not 1.18), or to credit any overpayment, to Deposit Account 06-0308.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call the undersigned, at Telephone Number (216) 363-9000.

Respectfully submitted,

Fay Sharpe LLP

October 4, 2010
Date

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